The Memphis Public Libraries:
Deepening and Expanding Youth Programs

Case study authors:

Benjamin Weil & John Newsome

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Executive summary

Increasingly, the Memphis Public Libraries (MPL) are becoming a place of deep learning for young people, entering into territory traditionally claimed by education and youth-development programs. Under the leadership of Director Keenon McCloy, MPL has worked to retain and develop the library's cadre of talented staff, and hired additional creative and committed subject-matter experts and community leaders to direct children's, youth, and adult programming. MPL also has pioneered CLOUD901, an 8,300 square-foot lab for teen exploration of science, technology, engineering, arts, and math programming; expanded creative STEM programming, linked to Shelby County public middle and high schools; launched Tween and Teen Innovation Centers designed to keep youth actively learning and engaged with their neighborhood library; established the "Connect Crew," a six-person team of talented program developers and presenters who deliver innovative programming throughout the community via a mobile van; implemented new professional-development opportunities for children's- and teen-services librarians, subsequently expanded to all librarians; and pursued non-traditional funding sources, resulting, among other things, in a $248,000 Justice Assistance Grant to support and expand STEM programming. Today the Memphis Public Libraries—a $20 million institution with eighteen branches serving 935,000 visitors annually—are in a position to inform national library dialogue about best practices in youth programming.

This case study outlines how the Memphis Public Libraries have deepened and expanded their youth programming in recent years, providing a valuable model for the library and youth-development sectors nation-wide. The case study provides a brief overview of the history of the city of Memphis and the role of MPL, followed by an overview of youth programs across the library system. This includes key programmatic shifts, implementation and challenges, along with spotlights on key elements, such as: MPL branch activities; CLOUD901 teen learning center; the partnership with Memphis-based AutoZone Corporation and the University of Memphis to run STEM camps for teens; professional development; adult services; and evaluation efforts at MPL. Appendices provide greater detail on some of these program and implementation successes.

Memphis history

The city of Memphis was founded in 1819. Thirty years later Memphis had become the largest inland cotton market in the world, an industry built on the backs of slaves. Following the Civil War, a prominent Black businessman, Robert Church, began acquiring land in Memphis; Church helped make Beale Street a vital part of daily life for African Americans. His son, Robert Church Jr., founded the Memphis chapter of the NAACP in 1917 and established the Solvent Savings Bank, the largest Black-owned bank in the world by 1921.[1]

In the 1880s a Memphis merchant bequeathed funds for the construction of a library built on land donated by the city government. The library opened in 1893, and by 1898 an average of 150 books a day were in circulation, thanks to the citizenry of Memphis, who raised funds over a period of five years to stock the shelves. During the first part of the 20th century Memphis's Cossitt Libraries expanded their operations into neighborhood libraries, public schools, and outreach to surrounding rural communities.

In 1958, the increasingly politically active NAACP brought suit against the Memphis Libraries on behalf of member Jesse Turner, an African-American certified public accountant, demanding their desegregation.[2] [3] In July 1961, the U.S. District Court for Western Tennessee ruled in the plaintiff's favor and required the desegregation of the Memphis Libraries.[4] By the 1960s there was a library branch in nearly every section of the city and surrounding Shelby County.[5] Today the Memphis Public Libraries' (MPL) Central Library is named for Benjamin L. Hooks, the Memphis lawyer, NAACP leader, and civil-rights leader who served as executive director of the national NAACP and as a commissioner of the Federal Communications Commission.

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[1] From www.memphistravel.com/memphis-history, accessed on 1/07/18.
[2] The Benjamin L. Hooks Institute for Social Change at The University of Memphis (date unknown). "The Civil Rights Era Begins in Memphis" at https://www.memphis.edu/benhooks/mapping-civil-rights/civil-rights-begins.php accessed on 10/08/19.
[3] Knowlton (2017) provides a long view of the segregated history of the Memphis Libraries; a detailed narrative of the proceedings around the desegregation of the Memphis Libraries can be found in Wiegand, W. and S. Wiegand (2018) The Desegregation of Public Libraries in the Jim Crow South: Civil Rights and Local Activism. LSU Press.
[4] Turner v. Randolph, 195 F. Supp. 677 (W.D. Tenn. 1961).
[5] The Memphis and Shelby County library systems merged with an agreement on joint funding in 1973; in 2004, Shelby County reduced Library funding resulting in the withdrawal of the four suburban library locations from the Memphis system.

Memphis and MPL today

As a city with a rich history in arts, culture and industry, Memphis and the Shelby County area have shown great progress in recent years with multiple successful historic preservation projects, growth across small businesses and major corporations, and a revitalized tourist industry. Updated music venues, state-of-the-art convention center and professional sports arena, expanded green spaces and Mississippi river access have helped support economic growth and revitalization across the region.

Despite the city's progress, Memphis youth, especially youth of color, continue to face obstacles due to entrenched racial and economic inequality, among other long-standing factors. Forty-four percent of those under 18 live in poverty (compared to a 17.5% rate nationally); African Americans, who make up 64% of the city's population, live in poverty at a rate twice that of white Memphians.[6] The unemployment rate of 13.9% for African Americans is over three times that for whites (4.5%) and 18% for those over 25 (of any race) who have not finished high school. Nineteen percent of Memphians aged 18 to 24 have no high school degree, are not in school, and do not work outside of the home.[7] The Violence Policy Center of the CDC reports that in 2016 Tennessee had the eighth-highest African-American homicide rate in the U.S.[8]

In the present, the Memphis Public Libraries have built a legacy of innovation and technical excellence. Dedicated public funding for the Library existed as early as 1903. A specialized children's department was created in 1905, public reading spaces were expanded in 1906, and bookmobiles were launched in 1931. In the 1970s, the library system expanded its business and technical collections and established an emphasis on information delivery. In the early 1980s, the Library developed a radio reading service for the blind and 24-hour radio and television stations. In 2005, MPL integrated the national 211 line into its services to connect patrons with the community information and referral resources of LINC, the Library Information Center. LINC maintains a large, comprehensive database of human-services organizations, government agencies, and volunteer groups, all of which can be accessed by dialing 211. Today the most common requests for help are utilities, food, protective services, legal assistance, child care, social support, housing, and mental health.

Despite a round of budget cuts in previous years, in 2007 MPL received the National Medal from the Institute for Museum and Library Services.[9] [10] In 2008 Keenon McCloy became director of libraries. A graduate of the University of California, Berkeley, and Rhodes College Institute for Executive Leadership and Leadership Memphis, McCloy worked in the City of Memphis Chief Administrative Office, the Mayor's Office, with the City Council, and the Sexual Assault Resource Center, before becoming director of the Division of Public Services and Neighborhoods.

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[6] U.S. Census Bureau (2018). *2017 American Community Survey Fact Finder* at
https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF.
[7] Annie E. Casey Foundation, KIDS COUNT Data Center at
https://datacenter.kidscount.org/data/tables/9292-youth-not-attending-school-and-not-working-by-age-group?loc=44&loct=3#detailed/
3/72,77/false/871,870,573,869,36,868,867,133,38,35/4121,4122,4123/18399,18400.
[8] Langley, M and J. Sugarman (2019). "Black Homicide Victimization in the United States: An Analysis of 2016 Homicide Data". *Violence Poverty Center.*
[9] Memphis Public Libraries. "Library History Collection" at https://www.memphislibrary.org/digmemphis/libraryhistory/.
[10] Knowlton, S. (2017). "The 'Negro Branch' Library in Memphis: A Case Study of Public Services in a Segregated Southern City." *Libraries: Culture, History, and Society, 1*(1), 23-45. doi:10.5325/libraries.1.1.0023.

Spotlight: South branch library

Located in the center of a shopping center, the South branch library is known as the jewel of the community in South Memphis. Staff members have crafted a wide range of programs to engage patrons across the spectrum, including college and career fairs. One of the most notable new program opportunities offered at the South branch is the monthly Tween and Teen Podcast, which features tween/teen-led digital interviews of interesting leaders across the city spanning many different professions. Students work closely with South branch staff as well as engineering and broadcast specialists from CLOUD901 (see page 7 for a full description) to develop and implement a monthly segment focused on community-related challenges and humanitarian efforts. Programs like these allow tweens and teens to engage in problem-based learning opportunities alongside the South branch team.

Under McCloy's leadership after 2008, the library system was made a part of Memphis City Government's Public Services and Neighborhoods Division (reporting directly to the office of then-Mayor Jim Strickland) and became fully integrated with municipal operations, with procedures streamlined to better serve the citizens of Memphis.[11] Today the Memphis Public Libraries are part of a $20 million institution comprised of 18 branches throughout the city and serving over 900,000 people.

Over the years, the Library has built and nurtured a range of relationships with the community, many of which had the capacity to increase resources available to MPL. The Memphis Public Library Foundation and other philanthropic partners like the Memphis Music Initiative consider the Library to be a strong partner, as do the members of Friends of the Library, an MPL-sponsored fundraising group. The Library has also been featured as a key participant in a number of city initiatives. These have included the Fourth Bluff promenade redevelopment (a $5 million grant to reimagine public space on four blocks of Downtown Memphis that include the Cossitt Library, University of Memphis Law School Promenade, and Mississippi River Parks), and the literacy and youth development plans launched by Mayor Strickland after his 2015 election.

Spotlight: Whitehaven and Poplar-White Station branch libraries

Whitehaven and Poplar-White Station are two MPL branches that have been home to some of the most innovative programming in the Library system. Both branches feature numerous literacy-based outreach programs implemented through partnerships with surrounding middle and high schools. Poplar-White Station and Whitehaven are also home to MPL's first Tween and Teen Innovation Centers (see page 15 for more details). Programs at the Innovation Centers include music design/performances, college and career readiness, poetry slams and spoken word, fashion design and textiles, agriculture development, and engineering concepts such as coding and e-sports. In designing the Poplar-White Station Tween and Teen Innovation Center, Library staff successfully mitigated limitations of the older building, including limited power outlets and an inability to contain noise due to its open concept. Today the Poplar-White Station Innovation Center provides a cozy spot for teens to hang out, study, or read; an inviting lounge just for tweens and teens; and a maker's space with art supplies and a variety of rotating passive programming (including blackout poetry, materials to Wreck-This-Journal, puzzles, and games). STEAM (science, technology, engineering, arts, and math) additions include build-your-own-computer kits, 3-D printing pens, a Cricut machine, and a Nintendo Switch with games that can be played by small groups. The Poplar-White Station branch also hosts Youth Advisory Council meetings.

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[11] From http://www.memphislibrary.org/digmemphis/libraryhistory/, accessed on 4/25/18.

MPL youth programs and related activities in recent years

MPL has re-imagined itself as a place of deep learning for young people, entering into territory traditionally claimed by youth development programs. With the aim of offering state-of-the-art youth programs and helping staff members become the best in their fields, the Library takes both program development and professional development seriously. This is the story of how they have done it.

I.   The early stages: 2015-2017

The first few years of MPL's changing youth programming were characterized by an exploration of how widely these programs could expand, both conceptually and in numbers. Key new staff members joined MPL leadership and brought new visions of what was possible.

MPL deepens its youth development work (2015). In 2015, under Director McCloy's leadership, and with support from other Library, city, and philanthropic leaders, MPL launched CLOUD901, a unique teen-learning laboratory that has since become one of the Library's most popular and successful assets (see box below for more details). Penguin Random House awarded MPL and CLOUD901 one of its Library Awards for Innovation for 2016. By 2016, MPL was a regionally and nationally recognized leader in the library sector, providing an array of services for young people, including early-childhood programming for toddlers and parents, after-school and weekend study time, computer labs, workshops for school-age students, and enriching summer-camp programs for middle- and high-school students.

MPL works with partners to strengthen STEM programming (2015). Within the framework of developing its youth programs, in 2015 MPL also began to focus more intensively on STEM (science, technology, engineering, and math) activities for young people. MPL was already participating in an annual weeklong "Teen Tech Camp," produced by the Society for Information Management and other partners. The camp (MPL's longest-running summer camp) aims to get young people—mostly students from Memphis public schools—excited about technology while they are still considering their future career opportunities. In 2017, MPL approached the Society for Information Management about an opportunity to modify the camp to serve the needs of children aged 9 to 12. The Society for Information Management now sponsors five MPL "Tween Tech Camps" each summer. In these camps students learn to write apps for cell phones and tablets. They also hear presentations on the business uses of technology and learn how critical technology is to the ordering, manufacturing, warehousing, and delivery processes.

Today MPL also offers the Memphis MechWarriors Robotics Team for people aged 13 to 18. The MechWarriors Robotics Team falls under the FIRST (For Inspiration and Recognition of Science and Technology) robotics umbrella. FIRST inspires young people to be science and technology leaders and innovators by engaging them in exciting mentor-based programs that build science, engineering, and technology skills; that inspire innovation; and that foster well-rounded life capabilities, including self-confidence, communication, and leadership. Mentors from STEM fields have built quality programming around coding, and both electrical and mechanical engineering to benefit the competitive robotics team. Teens from this program have gone on to major in STEM-based fields in college. The robotics team is housed under the CLOUD901 Teen Learning Lab.

Also beginning in 2015, MPL partnered with Code-Crew to provide coding programming with the CLOUD901 Teen Learning Lab. Code-Crew programs focus on ensuring that students are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming and software development concepts. Since 2015, Code-Crew has also helped supplement instruction through Coding Summer Camps, system-wide teen-based coding programs, and "hack-a-thons." Code-Crew has recently worked with Gaston Park branch's LarShay Watson to produce compelling programming that integrates science, math and engineering concepts through the art of gaming. Tweens and teens learn to write code to build gaming platforms and then engage in mini gaming tournaments as culminating activities. The program produces branch champions who move

on to compete in the city-wide Roblox Gaming Tournament, which includes extended mini break-out sessions on coding, guest speakers, and prizes.

Chris Marszalek becomes MPL deputy director (2015). After more than twenty years working in public libraries, and serving as LINC ready reference manager, Millington branch manager, and MPL regional manager, Chris Marszalek was appointed Director McCloy's deputy in 2015. Marszalek had previously worked in library management in Mississippi's Oktibbeha and Madison Counties, and Florida's Pasco and Pinellas Counties. Marszalek's leadership has proved instrumental in expanding MPL's outreach programming capabilities. Following his appointment as MPL deputy director, he would lead projects to not only develop the Connect Crew (see part III below), but also the design and implementation of the fleet of Start Here outreach service vehicles now commonly seen at community events. Marszalek would also initiate a mobile circulation project that allowed MPL to extend its ongoing library-card sign-up campaign throughout the community.

Sue Schnitzer joins MPL, and expands children's services programming (2016). In 2016 a new leader, Sue Schnitzer, joined MPL's ranks, first as a branch manager, then as MPL's children's services coordinator, and later as assistant director for outreach and special projects. Prior to moving to Memphis in 2016, Sue was the manager of the Glenwood Springs Branch Library in Colorado. Before becoming a librarian in 2012, Sue was a children's musician and worked in the nonprofit field. At MPL she has worked to increase outreach programming and access to STEAM activities for children, tweens, and teens, DiscoverREAD early literacy programs, and equitable access to arts and culture resources. She created and assists with the Library's adult sensory storytime, which serves 40+ adults with special needs each week. She also manages the Connect Crew (MPL's mobile outreach team), and the MPL ukulele program.

Dr. Tamika Carwell-Richmond joins MPL and strengthens teen services programming (2016). Around the same time that Sue Schnitzer joined MPL and shortly after the successful launch of CLOUD901, then-Teen Services Coordinator Janae Murdoch announced her impending departure from the organization. MPL and partners such as the Memphis Music Initiative were eager to find a successor poised to take the Library's work to even greater heights. In November 2016, Dr. Tamika Carwell-Richmond joined MPL as teen services coordinator. With great enthusiasm and a dedicated focus across the diverse roles in which she has served, Dr. Carwell-Richmond worked closely with teams to address the needs of a local leadership program continuum designed to drive sustainable academic achievement results for students across the K-12 spectrum, and launched a new national approach to developing high-performing instructional teams. Prior to joining MPL, Dr. Carwell-Richmond served as principal of an award-winning middle school in Memphis and Memphis managing director of the prestigious national New Leaders for New Schools program.

Spotlight: CLOUD901—A cornerstone of MPL STEAM programming

In September 2015, MPL launched CLOUD901, an 8,300 square-foot, state-of-the-art, social, creative, production, research, and performance technology lab where teens ages 13 to 18 can develop 21st-century skills, including innovation, collaboration, critical thinking, and problem-solving. Within CLOUD901, a mix of digital media, self-guided learning, and expert-led workshops provide teens with the autonomy necessary for creative thought while still working within the safety and structure of the Library. With video and audio production labs, editing and mixing stations, a performance area, a maker space, and plenty of collaboration and homework zones, CLOUD901 is both a creative outlet and a conduit, helping teens discover and cultivate the spark that will give them the edge necessary to succeed in the world beyond.

Designed by Teen Services Coordinator Janae Murdoch, CLOUD901 benefited from the contributions of Jessica Chaney, who joined MPL and became de facto CLOUD901 agency manager in December 2015 prior to being officially named to the position several months later. Since taking on the position, Chaney, whose background is in corporate communications and media, has worked with CLOUD901 staff to develop engaging STEAM-based programming, cultivated partnerships with other youth-serving organizations in the City of Memphis to enrich

programming opportunities, and worked with library systems across the country to implement learning labs. As Chaney has said, although CLOUD901 was based on a University of Chicago program, there were no blueprints or precedents at MPL for the new teen learning lab. "We were trying to figure out who we were and how we were going to serve [youth customers]," Chaney says, "in addition to figuring out how to create the best space for ourselves. To the leadership's credit, they gave us the freedom to figure that out, in addition to guidance." An early lesson was to determine which programs were a good fit within CLOUD901, ultimately leading to a reduction from thirty to ten programs. On the other hand, during Chaney's tenure at MPL, CLOUD901 staff numbers have increased from seven to twelve, and the growth in programming and partnerships has been significant. One early partner was the Memphis Music Initiative (MMI): CLOUD901 teamed up with MMI in 2016 to offer a film camp for Memphis teenagers. Since then, the partnership has produced hundreds of short films and YouTube videos of all genres. Several teens have become filmmakers, with many more actively working in the field, including some who have received grants, awards, found work on film sets, and become personal assistants for pilots.

The CLOUD901 robotics program also started in 2016. A number of schools had robotics programs at the time, but their grants fell through in 2016. The Library's initial robotics program budget of $10,000 has increased to $60,000 per year, with the help of corporate sponsorships and grants such as the federal Bureau of Justice Assistance "Justice Assistance Grant" (see below for more details). The robotics program that began with eight teens per year now serves 24, supported by eight mentors. In 2019 CLOUD901 introduced a girls-only robotics camp (thanks to funding from the WINKS organization), which has the advantage of making girls feel safe and empowered. As Chaney has said, "We were aware of the numbers, that not nearly as many women were pursuing STEM careers, and minority women even less." The girls-only robotics camp seeks to change that; even before its first cycle, the MPL STEM camp for girls had a waiting list, and the camp proved extremely popular, resulting in girls' increased participation in year-round STEM programs thereafter.

The CLOUD901 music camp on digital music was designed to allow songwriters, music producers, engineers, and interns to teach teenage students about music production concepts, including songwriting and digital musical arrangement, with the goal of enhancing their understanding of music and preparing them for further music-production study. Students study the basics of how to create or modify sounds, beats, and patterns, culminating in a Summer Beat Tape at the end of the camp. Week One focuses on familiarizing teens with each other, the instructor, and the tools they will use during the camp, as well as centering on songwriting. Week Two focuses on recording, mixing, and marketing.

CLOUD901 isn't just a teen learning lab. It's also a safe space, a resource, and a hangout. Staff members have learned to manage a wide range of issues, including how to recognize teenagers who may be suffering from abuse. And CLOUD901 staff members have to be flexible, and understand how best to interact with and support Memphis teens. Chaney herself has learned some important lessons managing the learning lab. "I've come to understand how important building a culture is. It's being able to have more grace and understanding, for both staff and youth, finding a balance of being an authority figure and realizing that they're still kids. I've learned that there is a balance between rules and guidelines, and making sure they can be expressive, comfortable, safe, and learning."

Yolondalyn Murray joins MPL as education liaison coordinator (2017). In early 2017 Yolondalyn Murray joined MPL as education liaison coordinator and began to focus on building school partnerships and STEM. With a background in psychology, education, and executive leadership, Murray worked for eight years as a secondary-school urban STEM educator for Shelby County Schools and is a board member of City University Schools in Memphis.

In July 2017 Murray and her colleagues presented the Library's STEM, program transition, and organizational changes in K-12 engagement, and future STEM plans in a community grantmakers' forum. This was the setting for connecting with the Irvin Lansky Foundation (a private organization dedicated to providing fiscal support for workforce development programs in South Memphis). The Lansky Foundation subsequently awarded MPL a grant

of $30,000 in STEM support for the LEGO Mindstorms robotics program, designed to help bridge the intellectual curiosity of upper-elementary and middle-school students so they wouldn't slip behind between elementary and high school. MPL targeted this group because of the citywide disparity in the number of cognitive programs for middle-school students outside of sports and high-risk mentoring.

One of Murray's first goals upon joining MPL was to align the Library's programming with the Tennessee Department of Education's K-8 academic standards to make programming more attractive to teachers in a high-stakes testing environment. By October 2017, Murray had rolled these standards out to the MPL children's services team, regional managers, and the leadership team.

II.   Programmatic shifts: 2017

During the second phase of MPL youth-program expansion the Library continued to develop new programming, but also began to look at the internal changes required to support this expansion. MPL initiated a collaboration with Public Equity Group to optimize and document its management practices, and reached out to new sources of support.

MPL refines its teen-services/youth-program development approaches (2017). By the end of 2016, the Memphis Public Libraries had already experienced two intense years of growth and change, including the launch of CLOUD901, a widening of STEM programming, and the considerable expansion of its youth programming in general. With this growth came growing pains. As Dr. Carwell-Richmond has said, "there were great things happening across the system, but some gaps in how programming was designed, implemented, and assessed. Questions came up for me about what exactly was programming as opposed to activities. This was a starting point for how to enhance programming and get a standard in place."

For instance, an initial Memphis Music Initiative assessment of CLOUD901 found considerable promise, but also pointed to gaps in program design. Given the CLOUD901 goal to reach a diverse teen population, the participation rate of female teenagers was quite low. Evaluators also refined the curriculum to include clearly articulated goals for each session, along with facilitation questions and structured activities that enable students to develop transferable skills.

In winter 2017, MPL and the Memphis Music Initiative enlisted Public Equity Group (PEG)—a boutique consulting firm that helps foundations, nonprofits, and other social sector organizations achieve impact—to help create a strategy for building out the Library's youth-programming strategy. Working closely with Director McCloy, Deputy Director Chris Marszalek, Dr. Carwell-Richmond, and other members of the MPL team, MPL and PEG sequenced their combined work into four stages.

Phase 1: Assessment
During the assessment phase of the MPL/PEG collaboration, the teams conducted interviews with MPL leadership; external stakeholders and partners (including the MPL Foundation, the Memphis Music Initiative, and the University of Memphis/AutoZone education program—see the box on page 13 for a description of the MPL/AutoZone/University of Memphis partnership); Memphis municipal government officials (including Mayor Jim Strickland and the director of the Memphis Office of Youth Services); and MPL focus groups (the youth-development leadership team, and CLOUD901 staff and youth participants).
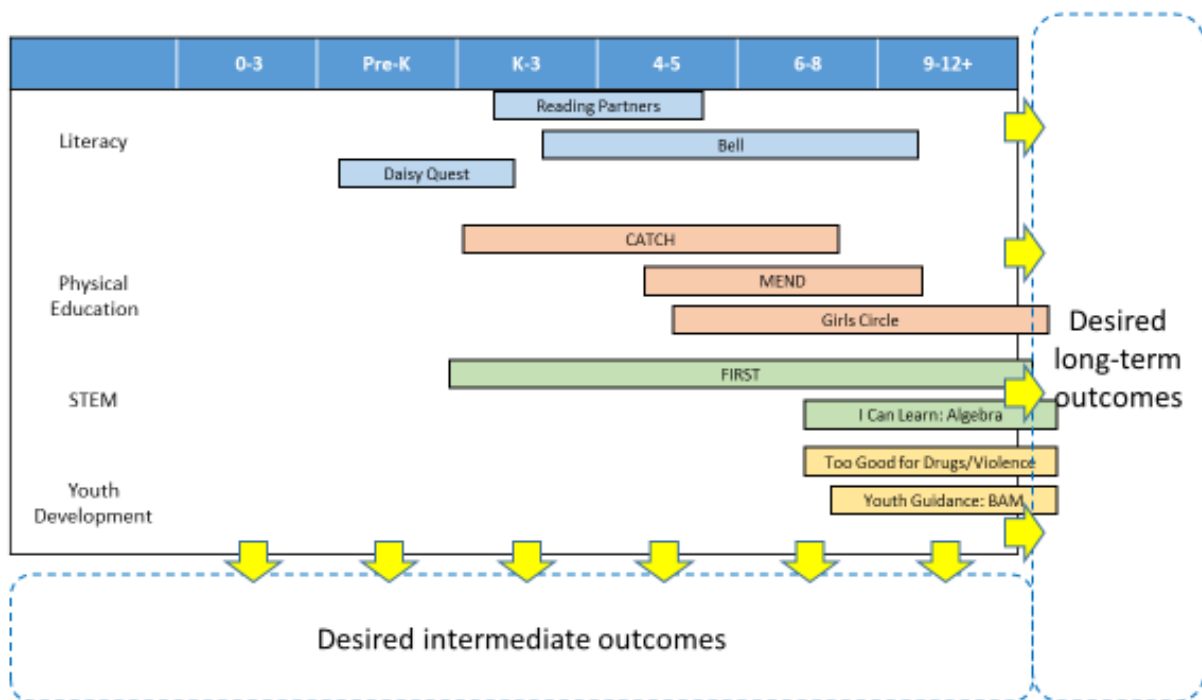
Phase 2: Identify best-fit program models to expand MPL's reach across age groups (0-250 and across skill "domains"
During this phase the teams researched the best-fit youth-program approaches, and sought out leading program examples for future inspiration, drawing on referrals from leading education and youth-development funders (such as the Edna McConnell Clark Foundation), the U.S. Department of Education best-practice program databases, and more. MPL and PEG also worked together to identify resources to support high-quality youth-program assessment,
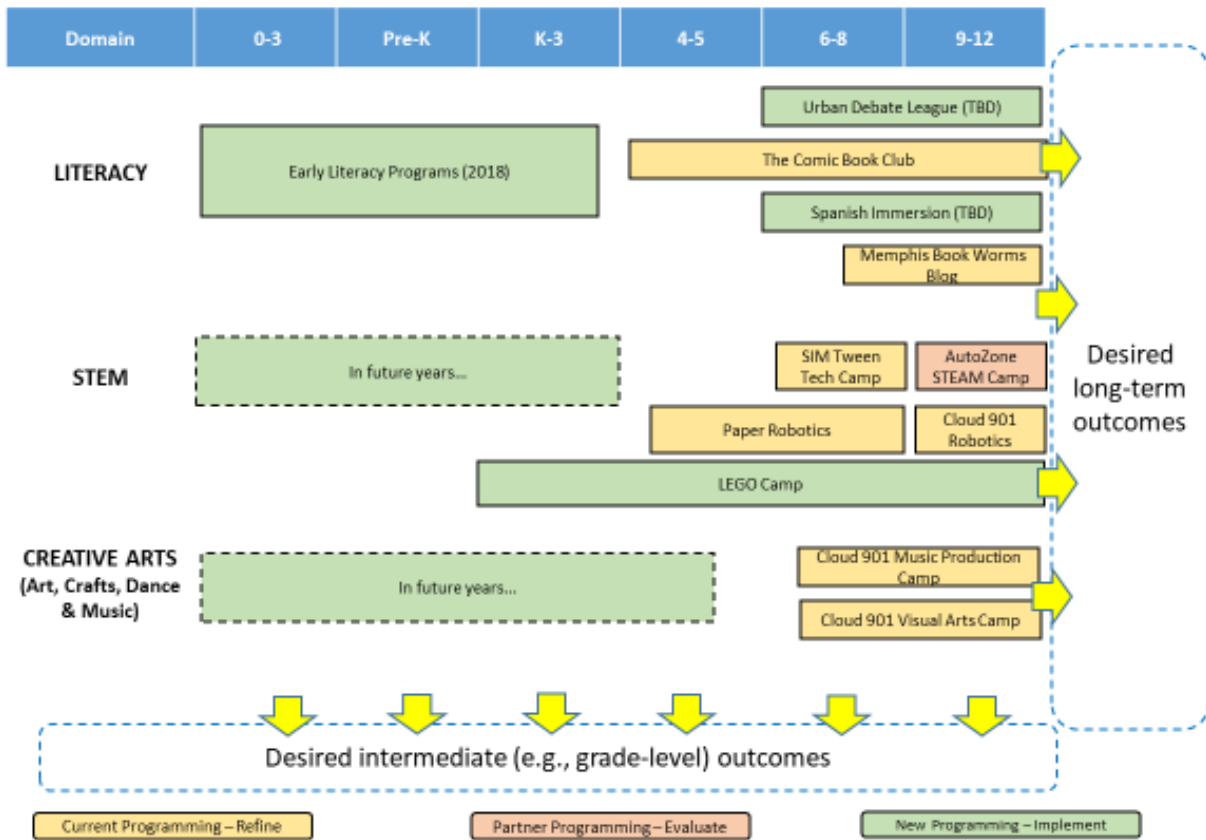
with particular attention to library-friendly approaches, including observation, informal participant interviews, focus groups, surveys, pre- and post-testing, and work portfolios.

Ultimately, the MPL team began to envision a portfolio of quality programming, from birth through adulthood, offered by MPL librarians and by partner organizations such as the University of Memphis, Literacy Mid-South, and Creative Aging; although completion of such a "portfolio" or "continuum" might take many years, already the Library's offerings were becoming more and more comprehensive, particularly in the STEM field and in literacy/English Language Arts.

Evidence-Based Practices Across the Continuum (An illustrative PEG framework)

MPL Summer Pilots – New Programs, Refinements & Partnerships

Domain	0-3	Pre-K	K-3	4-5	6-8	9-12

LITERACY
- Early Literacy Programs (2018)
- Urban Debate League (TBD)
- The Comic Book Club
- Spanish Immersion (TBD)
- Memphis Book Worms Blog

STEM
- In future years…
- SIM Tween Tech Camp
- AutoZone STEAM Camp
- Paper Robotics
- Cloud 901 Robotics
- LEGO Camp

CREATIVE ARTS (Art, Crafts, Dance & Music)
- In future years…
- Cloud 901 Music Production Camp
- Cloud 901 Visual Arts Camp

Desired long-term outcomes

Desired intermediate (e.g., grade-level) outcomes

Current Programming – Refine | Partner Programming – Evaluate | New Programming – Implement

Phase 3: Classify, refine, and codify programming
During the third phase of the project, MPL and PEG worked within the Library's existing portfolio to codify and refine a few, especially notable youth programs already offered at CLOUD901 and throughout the library system. The group identified the University of Pennsylvania Literacy Network's Understanding By Design framework as a touchstone for rigorous program design; Understanding By Design is widely used as a teacher professional development tool in teacher-certification graduate programs and school districts around the US (see Appendix). The Understanding By Design framework proved key to refinement of MPL's youth programming approaches; the framework (and coaching from Penn Literacy Network and PEG staff) helped Library leaders and program managers think beyond program curriculum and activities to focus more explicitly and expansively on desired program outcomes (see graphic examples above), even linking them to state standards (unusual among after school programs). Through internal planning sessions, MPL staff made more explicit their aims to teach STEM content and also socio-emotional skills such as teamwork, conflict resolution, time management, self-regulation, communication, and more (for examples of potential socio-emotional skill indicators, please see "From Soft Skills to Hard Data" in Appendix).

MPL and PEG completed Phase 3 by documenting existing program designs to create "plug-and-play" guides for the scaling up of key programs across the Library network. For example, for the CLOUD901 summer camps, the teams aligned the program designs to federal and state academic standards; articulated key student socio-emotional goals and outcomes; captured new elements of program design and curriculum; and incorporated new assessment components, as needed.

The teams then modified the Understanding by Design framework, creating their own "Everyday Program Design" framework for shorter, but still multi-session or recurring programs (versus simpler, one-time workshops). The table below illustrates the application of the design framework to MPL's Paper Robotics, a popular two-session workshop that takes place at the Benjamin L. Hooks Central branch.

"Everyday Program Design" Framework	
Summary: MPL's Paper Robotics is a hands-on learning program for students 8-12 years old in which students gain an understanding of the foundations of robotics by assembling paper robots that demonstrate their knowledge of basic mechanics.	
Goals/Desired Results What (e.g., knowledge and skills) do we want participants to know and be able to do?	**Lesson Plans/Activities** What "learning" activities will be used to impart the knowledge/skills and reach the desired results?
1. Robotics Knowledge Transfer Skill: Build a simple paper robot with the capacity to perform simple functions. 2. SEL Competency Transfer Skill: Demonstrate effective communication & collaboration skills to work with others	Day One: Chibi Robot Papercraft Blueprint & How-to Video Day Two: Instructables Robot Video & Pattern Day Three: Instructables Paperbot Video & Pattern Day Four: Walking Alphabot Video & Pattern
Assessment (Evidence) How will we know participants acquired the skills? What assessment tools/methodologies will we use (e.g., focus groups, observation, exit ticket, artifact)?	**Resources** What resources will be needed to deliver the programming (e.g., facilitator & training, materials, volunteers, snacks, etc.)?
1. Each participant will have completed 4 toys (artifact). 2. Each participant will be able to articulate a description of basic mechanics and have acquired a new understanding of vocabulary (angles, weight, axel, slide, pulley, etc.) (focus groups, observation). 3. Participants will have learned to work and communicate collaboratively (observation).	2-hour workshop (or 4 consecutive days) Cannon Paperworks Robot Patterns; other online sources Card stock Access to color printer Scissors Exacto Knives

Phase 4: Implement MPL initiatives
The final phase of the project was to build the organizational infrastructure to support the scaling up of MPL's youth programming. The first step was to create a Quality and Design Team and an Assessment and Learning Working Group. A second was to envision staffing and resource changes to support gradual and long-term program curriculum development (for example via new programming-focused staff, an idea that gained support and funding from the mayor, giving rise to the "Connect Crew"), as well as library-wide quality control. In addition, the MPL and PEG teams decided on a strategy for: 1) developing and implementing new youth programming; 2) training librarians in the Everyday Program Design framework and in ongoing program design and implementation; 3) expanding student/participant interviews, focus groups, and observation (among other assessment approaches); and 4) hiring or secondment of staff with program development, curriculum development, and assessment expertise.

As Director McCloy has said, "PEG helped us develop processes to replicate things, grow things, make them more transformative and intentional. We're now applying some of the process to our teen programming."

MPL hires additional staff and expands its weekend hours (2017). Then-Mayor Strickland was particularly supportive of Library services, especially youth programming, from the time he first took office in 2016. In July 2017, the Library received a fiscal year 2018 budget increase to expand its hours of operation. The funding increase ensured that all branches in Memphis were open at least six days per week—opening up the ten branches that were closed on Friday for many years. As a result, MPL added 145 hours of library service per week. The budget increase included funding to hire 20 part-time employees and additional funds for youth programming expenses. In

July 2018, the Library received a fiscal year 2019 budget increase to hire a program team of 9.5 full-time employees (seven full-time and five part-time) tasked with program planning and outreach.

This was a major turn-around for MPL. Between 2007 and 2012, operating funds had dropped by $2.8 million, and staff levels decreased to a low of 265 full-time positions in 2009. In 2013 the Library operated with no city-funded part-time employees. MPL currently operates with 284 full-time positions and just over 50 part-time employees. An outside consultant helped the Library perform a comprehensive analysis of its compensation structure, including the evaluation of every full-time employee's job and salary history. As a result, some salaries, titles, and job grades were restructured (including a number of raises).

According to Deputy Director Marszalek, Director McCloy's years of experience in Memphis city government and her ability to develop positive relationships with all of the elected officials were key factors in MPL's positive relationship with the Mayor's Office and the expansion that this collaboration enabled.

Jordan Howard joins MPL as grant-writer, later becoming grants coordinator (2017). Jordan Howard, who holds a masters of public administration in non-profit/public/organizational management, brought to the table several years of experience in non-profit operations, communications and development. Impressed by the tradition of development and grant-writing that she found at MPL, Jordan was able to expand the libraries' outreach to additional funding sources, always bearing in mind existing information about community needs and requests.

Spotlight: AutoZone STEM camps and courses

Beginning in summer 2016, MPL teamed up with AutoZone, the international Memphis-based retailer of aftermarket automotive parts and accessories, and the University of Memphis, to begin leading summer STEM camps for Memphis teens aged 12 to 18. The camps offer high-school students hands-on experiences and team activities featuring engineering problem-solving challenges and robotics activities culminating in the completion of weekly projects. The teens, who can participate in camps for girls only, boys only, or both girls and boys, are immersed in science, technology, engineering, and math education while focusing on college and career preparation. Upon completion of the camp, campers leave with a greater capacity for problem-based learning and newfound knowledge and appreciation for STEM fields. Library teen services staff and "STEM Ambassadors" (engineering and technology students from the University of Memphis) have led the camps, which have been offered continuously since 2016 and also evolved into year-round STEM courses at the Library and schools.

As the AutoZone courses gained in popularity, the Library worked with Public Equity Group (see section on "Programmatic shifts" above) to examine program design and preparation for training facilitators. An AutoZone STEM camp survey from summer 2019 (see box on Evaluation below) shows that participants were not only preparing for STEM careers, but also learning about critical thinking, time and project management, and teamwork, as well as reporting gains in confidence and knowledge over the course of the program. A shift in evaluation focus and facilitator training has led MPL and its partners to include joint training sessions in advance of the program, which helps familiarize library staff with the camp content, and helps Ambassadors understand library staff roles and perspectives. Overall, joint training sessions provide better coordination from the outset. As Dr. Stephanie Ivey, associate dean for research at the University of Memphis Herff College of Engineering has said, "The partnership between the University of Memphis and MPL is very strong. We have collaborated on other grant proposals, and will be extending our work together this year to the academic year as well."

III.   Implementation of programmatic shifts: 2018-present

The third chapter of MPL's youth programming changes has involved a deepening of professional development at the Library, and has witnessed the rolling out of the frameworks and best practices MPL identified in prior years.

The Library has expanded its programming through mobile services, and continues to enhance STEM programs in innovative ways and in additional branches.

MPL extends professional development to teen and children's services (2018). In 2018, the Library refined its professional development training to create better "onboarding" experiences for library visitors, known internally as "customers." A significant increase in funding from the Friends of the Library allowed MPL to extend its professional development to teen and children's services. Now the Library's goal is to continue rotating professional-development sessions until all staff have been trained. If a branch is short-staffed, it can send over one lead who will then return to lead a train-the-trainer session.

Spotlight: Professional development at MPL

Professional development has been an important force at MPL for many years. Damone Virgilio, on staff since 1997, and previously education director for Memphis Planned Parenthood, has been MPL staff development manager since 2004. In the years that followed Virgilio's appointment as staff development manager at MPL, he helped develop a training system covering every aspect of providing service in a public library environment. The four training categories came to be the following:
● Orientation training on MPL's structure and services provided, three sessions designed to help staff connect with the Library's "Start Here" brand, customer-service/customer-experience training, emergency-response training, and security-incident training.
● Information-delivery training, including courses for basic reader's advisory, a year-long genre-training program, search-strategies training focusing on techniques and tools to answer customers' questions, children's-services institute training, and teen-services institute training.
● Technical training providing hands-on, instructor-guided training to ensure all staff members have sufficient competencies to meet customer technical needs. All staff members receive training in the use of Workflows (MPL's integrated library software) for information delivery and circulation functions, Office desktop and 365 applications, developing presentations, use of smart devices, and a wide variety of other applications.
● Professional growth training includes professional business writing, meeting management, effective presentations, public speaking, and a host of other concept-based training designed to improve productivity.

In 2019, 126 professional development sessions were conducted at the Library, and all but the newest employees hired since 2019 have matriculated through all required training for their classification.

MPL expands early-childhood programming (2018). Assistant Director for Outreach and Special Projects Sue Schnitzer has found it crucial to make sure programming is well-designed and well-supported. Under Schnitzer's leadership MPL has included activities such as a curriculum from Literacy Mid-South, implemented at three Library branches Monday to Thursday. "Foster grandparents" also work with children in various branches on literacy instruction. Summer programs are enormously popular, but pose a particular challenge, with 1,500 individual programs requiring oversight. Many of these programs are implemented in branches with smaller staffs. Branching out to other age groups is another challenge tied to MPL's "growing pains," as Schnitzer puts it. "What I want is for us to reach the kids who are falling through the gaps," she has said.

MPL hires new program experts ("Connect Crew") and purchases a mobile vehicle (2018-2019). In January 2019, thanks to funding from the Society for Science and the Public, and the National Libraries of Medicine, MPL launched its "Start Here Mobile Technology Van," fully staffed with the Connect Crew, a six-person team of talented program developers and presenters, to deliver innovative programming throughout the community. Team members were strategically selected to incorporate a wide range of expertise so that program offerings could be tailored to a variety of community groups and audience needs. The Connect Crew now hosts programs in parks,

community centers, laundromats, apartment buildings, and retail centers, among others. In their first six months of operation, the team hosted more than 125 programs and outreach events with over 8,000 participants. By February 2020, they had hosted 151 programs with 4,377 participants. The vast majority of attendees are from traditionally underserved populations, including at-risk and low-opportunity youth, minorities, low-income residents, low-literacy adults, seniors at risk for social isolation, and those lacking transportation to attend traditional Library programs. In addition, the Connect Crew created over 800 library cards within its first year of existence.

MPL develops STEM Robotics camps (2018-19): In fall 2018 MPL began to offer LEGO Mindstorms robotics experiences as outreach programs in 12 K-8 schools in the South Memphis area. Another innovation that Education Liaison Coordinator Yolandalyn Murray implemented in 2018 was the student library card program, which allows students to obtain a library card without a parent present. After a parent or guardian has filled out the library card application, the student card allows K-12 students to check out up to three physical items at a time.

In 2019, MPL launched the LEGO Mindstorms robotics programs at the Whitehaven, Central, and South branches. LEGO Mindstorms quickly became one of the Library's most popular summer programs, not least of all because it provided the same programming for free as elite STEM camps in Germantown/East Memphis offered for $300-$500 per week. In April 2019, MPL also received another $30,000 from the Lansky Foundation to continue the LEGO robotics programs.

During Explore Memphis 2019 (MPL's citywide summer programs), MPL began to offer intermediate robotics camps for the LEGO Mindstorms robotics programs to kick-start a first LEGO League team at the Library. In August 2019, MPL held a one-day conference event for 117 Shelby County School librarians and media specialists with breakout sessions, vendor set-ups, and programming demonstrations for teachers. This event motivated schools to request the commitment of regular programming from MPL.

MPL secures federal funding to support and expand its burgeoning STEM programming (2018-2019). In 2018-2019 MPL had its first opportunity to apply for a federal grant. In its application to the federal Bureau of Justice Assistance for a Justice Assistance Grant, MPL focused on current and prospective Library programs to engage young people after school. The objectives of the enhanced programming were 1) to improve branch capacity to implement after-school activities, including STEAM programs; 2) to improve attendance in after-school activities at MPL branches by overcoming barriers to at-risk students' ability to participate and expanding program offerings to appeal to a larger audience; and 3) to further level the playing field for low-income students to participate in STEAM programming. The result was a three-year grant, awarding MPL a total of $248,000 ($92,000 in 2020, and $78,000 in both 2021 and 2022). The funding benefits the MPL robotics team, digital and photography programs, and STEAM programming in general. More specifically, the Justice Assistance Grant supports MPL summer art camp, music camp, and robotics camp, and will enable staff to offer coding camp in years two and three of the project.

MPL establishes Tween and Teen Innovation Centers at the Poplar-White Station and Whitehaven branches (2019). Continuing to push the envelope on innovation of high-quality, outcomes-based programming across the MPL system, Dr. Carwell-Richmond developed and pitched the idea of developing teen-focused spaces within library branches across the city. With support from the International Paper Foundation and the assistance of the Memphis Library Foundation, MPL established Tween and Teen Innovation Centers at the Poplar-White Station and Whitehaven branches. Through collaboration with branch Teen Services leads and members of the branches' Teen Advisory Councils, these pilot branches were selected based on level of programmatic engagement, branch space, and staff capacity. The Innovation Centers aim to provide STEAM-focused interactive experiences for youth to engage, learn, and create. Staff members have observed that tweens often feel too old for children's services, but are not yet old enough to transition to teen services. The tween population continues to provide opportunities for the Teen Innovation Centers to expand programming as current program offerings attract more of a teen

population. The Tween and Teen Innovation Centers give tweens a continuum of resources to prepare them to transition into teen STEAM programs and beyond to cultivate a pattern for lifelong learning.

A variety of programs, resources, and equipment are currently being implemented and are in high demand at the Innovation Centers. These include equipment and resources such as 3-D pens, design software, music production, poetry/spoken word compilation, and computer science-related areas such as coding and game design. Fashion/clothing design, entrepreneurship, and agriculture-focused programs have also been among the requests. MPL is now working with the International Paper Foundation and the Memphis Library Foundation to establish Teen Innovation Centers at two additional Library branches that serve large numbers of young people in various risk categories (such as the East Shelby and South branches). Installing Innovation Centers at two such locations will ensure that those most in need of after-school resources can access them.

Spotlight: Adult services at MPL

Adult services also are an important component of MPL's offerings. Services that adults can benefit from include resume-building, career fairs, arts and cultural programming, and "Techie Seniors'' tablet and smartphone classes. MPL also has a multi-unit financial literacy course that rotates through the branch libraries, and regularly offers HiSET classes through HopeWorks, adult basic education classes in partnership with Literacy Mid-South, and ESL learning opportunities. Recent adult-services program highlights include pottery, painting, creative-writing workshops, 5 Fridays of Jazz, parenting classes, outreach to local senior centers and living facilities, Front Porch Music Series, ukulele classes, and the inaugural MPL Pride Kick-Off. Special collections include Adult New Readers, ESL, the award-winning Health Information Center, historical and genealogy collections, seed libraries, non-traditional collections like instruments and Wi-Fi hotspots, and Books-In-A-Bag for local book clubs. MPL also partners with Creative Aging Mid-South to bring life-long learning opportunities for older adults. Six of the Library branches have Citizenship Corners to provide accurate, free information from the U.S. Citizenship and Immigration Services of the United States Government. The information includes training material, test information, civic lessons and all necessary steps in the naturalization and immigration process. The Benjamin L. Hooks Central Library also hosts naturalization ceremonies and connects new citizens with valuable services and resources. Welcome Home Centers were launched in all 18 locations in 2019 to offer targeted community resources to help residents access safe and affordable housing.

Challenges in implementation

MPL leadership has been careful to match youth program changes and scaling to the absorptive capacity of the organization, but challenges inevitably surfaced when the Library began to formalize the design and codification of its programs.

The MPL/PEG collaboration began in January 2017, but it was already too late for the Library to develop new summer programming for implementation in the same year; new program design would have to wait until 2018. In addition, some MPL staff members felt that the Library should be a fun place, not as rigorous as a school class. They likewise questioned (and continue to question) the appropriateness of the University of Pennsylvania Literacy Network's Understanding by Design framework (typically used among educators in classroom settings), especially if such planning might make youth programming less fun. In response, MPL has used piloting and demonstration to adapt the Understanding by Design framework and make it more user-friendly. As Director McCloy has noted, "helping staff adopt more structured program-development approaches takes a lot more thought and planning." In terms of youth-program design and evaluation, there likewise was also some disbelief among MPL staff in the wisdom of conducting focus groups with young people, who they feared might not attend and or engage fully. Informal focus groups with Memphis youth and adult Library customers have helped demystify evaluation and garnered helpful feedback on the Library's current and prospective programs.
As Dr. Carwell-Richmond has said, "This was brand-new work for the library system as a whole. We've tackled it from a 'crawl, walk, run' perspective."

An ongoing challenge for the Library relates to funding: while MPL has an annual budget of over $20 million, most of these funds are earmarked for personnel and hard expenses such as books and facility management. It can be difficult to find sufficient funding for program staff, curricula, materials, etc., let alone "best-practice" evaluation practices (e.g., tool development, data collection, analysis, reporting, and sense-making that drives effective program refinement, staff development, and more). Increasing or re-allocating the MPL budget would require a significant shift in operations and culture, and like all major changes, this takes time. The annual budget has grown in recent years but staff morale has flagged due to perceptions of inequitable compensation relative to the sector, which led Director McCloy to fight for raises for librarians, on par with other civil servants.

Over the past five years MPL has learned that coordination and consistency in strategy rollout (to ensure continuous sharing of standards, lessons learned, emerging/best practices) require considerable systems, ongoing support, and change management. Improving youth programming and sustaining pilot programs will require continued and expanded attention to culture, funding, operational priorities, and other capacity requirements.

Spotlight: Evaluation at MPL

The Library applies a wide range of evaluation methods at many different levels of its programming. At the broadest level, MPL has an annual survey that measures the uptake and usages of its services in general. The number of youth programs increased from 1,411 in 2015 to 4,478 in 2019, while attendance of youth programs was 35,467 in 2015, moving up to 85,286 by 2019.

Within its many programs, the Library uses specific evaluation techniques based on a program's level of intensity and complexity. Everyday programs like the popular ukulele class and DiscoverRead may use simple techniques such as surveys, observation, and focus groups. More complex programs that require a longer commitment, such as the AutoZone summer STEM camps and some of the CLOUD901 STEAM classes, may use both pre- and post-surveys or end-of-class surveys to determine effects on participants.

For example, a ukulele class focus group from 2017 took only 5-7 minutes. One question asked was "How else has the program been helpful to you?" Participants responded that "the program helps me with my discipline [teenage girl]," "I have ADHD and it helps me focus and relax [11-year-old boy]," "music is a way of soothing the soul and relaxing," and "it helps with arthritis [70-80-year-old woman]."

MPL and the University of Memphis worked together to sharpen assessment of the AutoZone STEM camps, including the addition of more questions on STEM content acquisition (beyond future STEM career interest). A revised AutoZone STEM camp survey from summer 2019 covered four different sessions, and included introductory and exit surveys. In addition to evaluation of robotics knowledge, the new survey asked such life-skills questions as: "In science or math class at school, I feel confident troubleshooting when things don't work the way they should" (pre-survey) and "During group projects at this camp, I feel confident troubleshooting when things don't work the way they should" (post-survey). Answers to both of these questions ranged from "I feel extremely confident" to "I don't feel confident." See Appendix for an example of AutoZone STEM camp survey results.

A 2019 all-girls robotics camp survey asked 15 different questions, including "What was one surprising thing that you learned during camp that you didn't expect to?" Answers included "creating a car that moved with programming," "how to work with circuits," and "that robotics is really fun and cool." A 2019 summer sculpture camp asked ten questions, including "What do you need to do to make sure that pieces of your sculpture don't crack off during firing?" Answers included "no spaces or air bubbles," "you need to make sure that your clay isn't too thin," and "packing them in tightly will prevent air bubbles, and as a result no explosions will occur."
MPL is continuing to develop its evaluation systems as its programming expands and expects both the breadth and depth of assessment methods to increase.

Conclusion

The Memphis Public Libraries have come a long way since their founding in 1893. MPL has grown into a $20 million institution with 18 branches serving nearly 935,000 visitors. Today MPL is in a position to inform national library dialogue about best practices in youth programming. The MPL program framework has evolved into a full professional-development model for staff, with the goal of continuing rotating sessions until all staff members at every branch have been trained. It has trained librarians in the Everyday Program Design framework. It has hired or seconded staff with program development, curriculum development, and assessment expertise. In collaboration with the University of Memphis and based on feedback from campers and facilitators, MPL is expanding its AutoZone STEM camps and reorienting them toward project-based curriculum. On the literacy front, in partnership with Shelby County Schools, MPL is organizing the Read Across the Schools program within its branches. The Library is broadening its actual and potential resource base through successful grant applications to less traditional funders. And to strengthen evaluation, the Library has expanded student and participant interviews, focus groups, and observation. In November 2019 MPL participated in the annual conference of the Young Adult Library Services Association as a leader in the field, sharing its institutional learning journey. As this journey continues, MPL is seeking to codify, study, and scale up lessons, approaches, and pilot programs citywide, efforts poised to put Memphis at the forefront of education and youth development nationally.

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